

## *Milk and dairy*

Book or Report Section

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**\*\*\*pages 60–61**  
**[A head]**  
**Milk and Dairy**

**[30 second digest]**

Dairy foods are not essential in our diet, but can contribute to over 40% of daily intake of calcium, iodine, phosphorus and some B-vitamins across Europe and in the USA. Dairy also provides a higher quality of protein than meat. All dairy foods are made from milk that comes from ruminant animals such as cows, sheep, goats and water buffalo and have been consumed for over 7500 years in some European populations. There is a popular misconception that milk is a high-fat food, yet whole milk contains only 3.6% fat, semi-skimmed 1.7% and skimmed 0%. Dairy foods are the main contributor to saturated fat intake in many European countries, but a high intake of dairy (excluding butter and cream) is not generally associated with heart disease risk. On the contrary, proteins, calcium, magnesium and probiotic bacteria in dairy foods have been linked to some beneficial effects on heart health, including blood pressure lowering. While some individuals develop an allergy to milk protein, others have lactose intolerance and are unable to digest dairy sugar (lactose). Interestingly, adult lactose intolerance is a normal condition in mammals. However, most humans have a genetic mutation that enables them to consume dairy products throughout adulthood, due to the persistence of lactase, required for lactose digestion.

**[3 minute snack]**

Milk is an excellent medium for bacterial growth, so to prolong its shelf life and ensure it is safe to drink, milk can be heat-treated by pasteurisation. This process involves heating milk to 72°C for 15–21 seconds, which maintains its nutritive content, apart from a small loss of vitamin B12. In the production of cheese and yoghurt, added bacteria ferment lactose, producing lactic acid, which thickens the milk and gives cheese and yoghurt their characteristic sour taste.

**[3 second bite]**

Milk is a highly nutritious food, with high absorbable calcium for bone health, yet humans are the only animals to drink milk throughout life.

**[Related Topics]**

*See also*

Food allergies & intolerances

page 102

Vitamin D & calcium

page 126

Probiotics & prebiotics

page 128

Dietary fats and heart disease

Page xxx

**[3-Second Biographies]**

**Louis Pasteur (1822-1895)**

A French microbiologist, born in Dole, was the first to conduct pasteurisation tests in 1862 for milk preservation. Pasteur is credited with revolutionising the safety of milk which enabled it to be stored and distributed widely. Commercial pasteurisation was introduced in 1895.

[Julie Lovegrove]